

## 7 EFFECTS OF ASSEMBLY AT ONSHORE LOCATION

### 7.1 STATUS OF THE SITE

The elements of each WTG unit will be transported to a port or other facility for final preparation, assembly into larger components and load-out. This site has not yet been selected, but will be located on the east coast of the UK, for ease of access to the Beatrice field.

The assembly location will be a port or other similar site at which commercial or industrial activity is already being undertaken. It is, therefore, likely that the effects of assembling the components of the WTGs would be similar to some of the effects already occasionally experienced at the site from other activities carried out there.

### 7.2 POTENTIAL IMPACTS AND MAIN RECEPTORS

The main elements or components that are likely to be transported to the site, and stored for a time awaiting assembly, would be the substructure and its piles, the soft landing system, the tower, the turbine nacelle, and the blades.

The transportation of these components by sea, and their storage at the site, might impact shipping activity close to any port or harbour that is used, other users of the site, and local communities. The assembly of components at the site might cause local short-term visual impacts, and be a source of additional noise, light, dust and gaseous emissions.

Figure 7.1 Tower and turbine ready for transportation.



### **7.3 MAGNITUDE OF EFFECTS**

All components will be delivered by sea using regular cargo vessels. This is unlikely to cause inconvenience to other users of the sea, or unusual impacts within the port itself.

Once delivered, the items will be stored at the site. Cranes and other equipment will then be used to manipulate them into position, and assemble them into a larger unit. Items will be joined together by bolting, although some welding may be required for the fixing and removal of temporary steelwork. These activities may result in transient nuisance to people living in close proximity to the site, but the effects will be no different in nature or scale from those arising already from the other types of activity that are carried out at the site.

Consultees have expressed concern about the visual intrusion of the partially assembled WTGs at the onshore site. Figure 7.1 illustrates how the WTG unit would look immediately before being loaded onto a cargo barge for transportation offshore. The partially assembled unit would comprise the upper part of the soft lander (used as a temporary base), the tower, and the turbine fitted with three blades. The total height of the unit to the tip of a vertical blade would be about 151m, and it is planned that these units would remain onshore for a short time between assembly and loading out. The unit onshore would not bear any lights.

There would also be short-term positive effects for the assembly location, as a result of the additional commercial activities necessary for the handling and assembly of the WTGs.

### **7.4 MITIGATION AND MONITORING**

The site selected for assembly will be suitably equipped to handle the different components and the vessels required to take them offshore. Before awarding a contract, Talisman will visit the site and undertake an audit, to confirm that its operations meet the environmental standards required by Talisman. The selected site will have an environmental management system (EMS) in place, and bridging documents will be established between the site's EMS and Talisman's EMS to ensure that all potential sources of environmental impact are addressed and covered by the respective systems. If necessary, Talisman will ensure that the selected site has appropriate storage areas with bunds or closed drains, for items containing liquid contaminants, to ensure that if spilled they do not escape into the sea.

Because an existing working facility will be used, all activities at the assembly site would be controlled by the existing regulations, practices, and emergency procedures, and would be subject to inspection by regulatory agencies.

### **7.5 FURTHER RESEARCH PROPOSED**

Talisman will select the site for onshore assembly based on several factors including their capacity to deal with the WTG components, accessibility, distance from the Beatrice field, management and technical capability, socio-economic benefits and commercial proposal.

Figure 7.2 Assembled turbines and towers arriving at offshore location.



